IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

| | | | |
|---|---|---|---|
| In Re Application of: | Heger et al. | Docket No.: | 49619 |
| Serial No.: | 09/857,480 | Confirmation No.: | 4809 |
| Filing Date: | 8/13/2002 | Examiner: | YOUNG, MICAH PAUL |
| Customer No.: | 26474 | Art Unit: | 1618 |

For: Nanoparticulate core shell systems and the use thereof in pharmaceutical and cosmetic preparation

Honorable Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

REPLACEMENT
APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Sir:

This replacement Appeal Brief is submitted in response to the notice of non-compliant Appeal Brief mailed April 29, 2008.

This is an appeal from the Examiner's final rejection of claims 15 – 21 and 23 – 27, mailed September 22, 2007. The Notice of Appeal filed on September 27, 2007 was filed with a pre-Appeal Brief. A decision on the pre-Appeal Brief of September 27, 2007, was not mailed until April 28, 2008, thus no extension of time fees should be due.

The fee of $510.00 set forth in 37 C.F.R. § 41.20(b)(2) has already been paid by credit card. Please charge any shortage in fees due in connection with the filing of this paper, including Extension of Time fees, to Deposit Account 14.1437. Please credit any excess fees to such account.

REAL PARTY IN INTEREST:

The real party in interest is BASF Aktiengesellschaft, of Ludwigshafen, Germany.

RELATED APPEALS AND INTERFERENCES:

To the best of the undersigned's knowledge, there are no related interferences or judicial proceedings.

STATUS OF CLAIMS:

Claims 15 – 21 and 23 – 27 are pending in the application.
Claims 15 – 21 and 23 – 27 stand rejected.
Claims 1 – 14 and 22 are canceled.
Claims 15 – 21 and 23 – 27 are being appealed.

STATUS OF AMENDMENT:

Despite the fact that Applicants' Pre-Appeal Conference Request, filed September 24, 2007, was dismissed because it included a proposed amendment, no amendment was proposed after the final rejection mailed September 22, 2007.

SUMMARY OF CLAIMED SUBJECT MATTER:

Claim 15 relates to a process for preparing a nano-particulate preparation of a pharmaceutical or cosmetic active ingredient with a core/shell structure.[1] The particle size of the core/shell structure is in the range of 0.05 to 0.9 μm.[2] In the core of the nano-particulate preparation, an X-ray amorphous active ingredient[3] is present together with one or more copolymers of acrylates, methacrylates, methacrylic acid or acrylic acid.[4] The shell of the nano-particulate preparation consists of a stabilizing coating matrix.[5] The process according to claim 15, comprises mixing an active ingredient/polymer

[1] Page 1, lines 5 – 6 of the Specification.
[2] Page 10, lines 1 – 2 of the Specification.
[3] Page 4, lines 3 – 4 of the Specification.
[4] Page 4, lines 34 – 35 of the Specification.
[5] Page 3, lines 1 – 3 of the Specification.

solution or precipitate with an aqueous solution of a polymeric coating material[6] continuously in a mixing chamber. The mixing is achieved by spraying the two components as a compact jet into a mixing chamber.[7] The polymeric coating material is selected from the group consisting of gelatin, chitosan, alginates, casein, caseinates and homopolymers of acrylic acid.[8]

Claim 16, which depends from claim 15, further requires the core of the preparation to have at least two separate phases. One of these phases must consist of amorphous particles of the active ingredient, and the other phase must be a molecular dispersion of the active ingredient in a polymer matrix.[9]

Claim 17, which depends from claim 15, further requires the core of the preparation to have at least two separate phases. One of these phases must consist of amorphous active ingredient, and the other phase must be a polymer matrix free of active ingredient.[10]

Claim 18, which depends from claim 15, further requires the core polymers to be polymers which are suitable for pharmaceutical and cosmetic applications and which are insoluble or only partly soluble in water.[11]

Claim 19, which depends from claim 15, further requires the coating matrix of the nanoparticulate preparation to comprise polymeric peptides.[12]

Claim 20, which depends from claim 15, further requires the preparation to comprise gelatin as coating polymer.[13]

Claim 21, which depends from claim 15, further requires the preparation to comprise casein or sodium caseinate as coating matrix.[14]

Claim 23, which depends from claim 15, further requires the process to produce a hydrosol of the said nanoparticulate preparation.[15]

Claim 24, which depends from claim 23, further requires the sizes of the hydrosol

---

[6] Page 8, lines 37 – 39 of the Specification.
[7] Page 8, line 47 through page 9, line 2 of the Specification.
[8] Page 4, lines 12 – 30 of the Specification.
[9] Page 3, lines 5 – 11 of the Specification.
[10] Original claim 3 of the Specification.
[11] Page 5, lines 1 – 7 of the Specification.
[12] Original claim 5 of the Specification.
[13] Original claim 6 of the Specification.
[14] Original claim 7 of the Specification.
[15] Page 3, lines 30 – 39 of the Specification.

nanoparticles to increase by less than 50% in the first hour after preparation of the hydrosol.[16]

Claim 25, which depends from claim 15, further requires the process to comprise preparing a solution of the active ingredient in an organic solvent which is at least 10% by weight miscible in water,[17] mixing this solution with the core polymer or a solution of the core polymer in an organic solvent, and bringing the resulting mixture into contact with an aqueous solution of the coating polymer.[18]

Claim 26 relates to a nanoparticulate preparation of a pharmaceutical or cosmetic active ingredient with a core/shell structure[19] in which an X-ray amorphous active ingredient is present in the core together with one or more polymers.[20] The one or more polymers must be selected from the group consisting of copolymers of acrylates, methacrylates, methacrylic acid and acrylic acid.[21] The shell must consist of a stabilizing coating matrix,[22] wherein said polymeric coating material is selected from the group consisting of gelatin, chitosan, alginates, casein, caseinates and homopolymers of acrylic acid.[23] The particle size of the core/shell structure, according to claim 26 must be in the range of 0.05 to 0.9 μm.[24] The nanoparticulate preparation is obtained by mixing an active ingredient/core polymer solution or precipitate with an aqueous solution of the polymeric coating material continuously in a mixing chamber.[25]

Claim 27 depends from claim 26 and further requires that on redissolving the preparation has the same particle size distribution, with a variation of 20%, as the initial preparation.[26]

---

[16] Page 3, lines 30 – 39 of the Specification, and Page 17, lines 5 – 11 of the Specification.
[17] Page 7, lines 34 – 35 of the Specification.
[18] Original claim 11 of the Specification.
[19] Page 1, lines 5 – 6 of the Specification.
[20] Page 4, lines 3 – 4 of the Specification.
[21] Page 4, lines 34 – 35 of the Specification.
[22] Page 3, lines 1 – 3 of the Specification.
[23] Page 4, lines 12 – 30 of the Specification.
[24] Page 10, lines 1 – 2 of the Specification.
[25] Page 8, lines 37 – 39 of the Specification.
[26] Page 9, lines 34 – 41 of the Specification.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL:

Whether the examiner erred in rejecting:

I. Claims 15 – 18 and 23 – 27 under 35 U.S.C. §103(a) over *Vallet Mas et al.* (EP 0 717 989) in view of *Redlich et al.* (US 5,225,279),

II. Claims 19 and 20 under under 35 U.S.C. §103(a) over *Vallet Mas et al.* in view of *Weitshies et al.* (US 6,068,857), and

III. Claim 21 under 35 U.S.C. §103(a) over *Vallet Mas et al.* in view of *Liversidge et al.* (US 6,045,829).

ARGUMENT:

Regarding Rejection I:

The rejection of claims 15 – 18 and 23 – 27 under 35 U.S.C. §103(a) over *Vallet Mas et al.* (EP 0 717 989) in view of *Redlich et al.* (US 5,225,279) is in clear error.

"Under §103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved."[27]

**Scope and Content of the *Vallet Mas et al.* reference:**

The *Vallet Mas et al.* reference relates to a process for coating droplets or nanometric particles. The *Vallet Mas et al.* process involves mixing two "phases continuously while maintaining constant the relationship between the phases and the mixture volume and simultaneously spraying the resultant mixture in an evaporation system with temperature and vacuum conditions which provide for the instantaneous evaporation of the solvent from the polymer causing the deposition of the polymer around the particles or droplets."[28]

[27] Graham v. John Deere, 383 U.S. 1, at 17 – 18, 148 USPQ 459 (1966).
[28] Abstract EP 0 717 989 A1.

The Examiner mischaracterizes the scope and content of the *Vallet Mas et al.* reference by speculating that "the drug [utilized in the *Vallet Mas et al.* reference] is amorphous or at least non crystalline in nature, since dissolution is not required, and the core emulsion solution is not a suspension of materials."[29] This speculative mischaracterization of the scope and content of the *Vallet Mas et al.* reference is contrary to well-established precedent that:

> [t]o establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency … may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'[30]

A person of ordinary skill in the art would not conclude that the active ingredient utilized in the *Vallet Mas et al.* reference is necessarily an X-ray amorphous active ingredient on the basis posited by the Examiner.

**Differences between the *Vallet Mas et al.* reference and the claimed invention:**

When the scope and content of the *Vallet Mas et al.* reference is properly ascertained, it is clear that the reference fails to teach or suggest the utilization of an active ingredient that is an X-ray amorphous active ingredient, as required by all of the claims.

The *Vallet Mas et al.* reference does not disclose a nano-particulate preparation with a core/shell structure, where the core comprises one or more copolymers of acrylates, methacrylates, methacrylic acid or acrylic acid, as claimed in claims 26 and 27. Nor does the *Vallet Mas et al.* reference disclose a process for preparing a nano-particulate preparation with a core/shell structure, where the core comprises one or more copolymers of acrylates, methacrylates, methacrylic acid or acrylic acid, as claimed in

[29] Page 7, lines 10 – 11 of the final Office action mailed June 22, 2007.
[30] MPEP § 2112, citing In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (emphasis added).

claims 15 – 21, and 23 – 25.

**Scope and Content of the *Redlich et al.* reference:**

The *Redlich et al.* reference describes "an improved process for producing aqueous dispersions of polymeric core/shell particles prepared by sequential microsuspension polymerization having a core containing a solvent blend."[31] The process of *Redlich et al.* comprises:

(a) preparing a core emulsion containing an initial monomer,

(b) heating the core emulsion to polymerize the initial monomer, thereby forming core particles,

(c) adding at least one base, and

(d) optionally adding additional monomer which is polymerized on the core/shell particles.

The Examiner mischaracterizes the scope and content of the *Redlich et al.* reference, by reducing the reference to a mere disclosure of "core/shell particles comprising acrylate and methacrylate copolymers...."[32] Contrary to the Examiner's oversimplification of the reference, a person of ordinary skill in the art would understand that in the *Redlich et al.* process, core/shell particles are prepared by sequential microsuspension polymerization. The Examiner's mischaracterization of the scope and content of the Redlich et al. reference is particularly egregious, because, as will be discussed later, the Examiner's proposed combination would require a complete abandonment of the principle of operation (sequential microsuspension polymerization) of the *Redlich et al.* process.

In other words, in order to facilitate a hindsight reconstruction of the present rejection, the Examiner has ignored all aspects of the *Redlich et al.* process that do not compensate for the *Vallet Mas et al.* reference's failure to disclose a nano-particulate preparation with a core/shell structure, where the core comprises one or more copolymers of acrylates, methacrylates, methacrylic acid or acrylic acid.

[31] Column 4, lines 44 – 48 of US 5,225,279 (emphasis added).
[32] Page 3, lines 12 – 13 of the present Office action.

**Differences between the *Redlich et al.* reference and the claimed invention:**

Again, the *Redlich et al.* reference describes "an improved process for producing aqueous dispersions of polymeric core/shell particles prepared by sequential microsuspension polymerization having a core containing a solvent blend."[33] In other words, the microcapsule-type particles of *Redlich et al.* are not only obtained by a completely different process (sequential microsuspension polymerization), but also differ by having a solvent core comprising the active ingredient dissolved in a solvent blend.

**Nonobviousness of the claimed subject matter**:

Against this background of the scope and content of the prior art, the differences between the prior art and the claims; and the level of ordinary skill in the pertinent art the nonobviousness of the subject matter is clear.

The combination of references, proposed by the Examiner, fails to teach or suggest the utilization of an active ingredient that is an X-ray amorphous active ingredient. The Examiner acknowledges that neither reference requires an X-ray amorphous active ingredient. As discussed above, the Examiner's assertion that "the drug [utilized in the *Vallet Mas et al.* reference] is amorphous or at least non crystalline in nature,"[34] fails to establish that this feature is inherently present in the *Vallet Mas et al.* particles. "Inherency ... may not be established by probabilities or possibilities."[35] The Examiner's assertion is not necessarily true.

As discussed above, the Examiner's proposed combination would involve not mere modification of, but complete abandonment of the principle of operation (sequential microsuspension polymerization) of the *Redlich et al.* process. Of course, "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references

[33] Column 4, lines 44 – 48 of US 5,225,279.
[34] Page 7, lines 10 – 11 of the final Office action mailed June 22, 2007.
[35] MPEP § 2112, citing In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (emphasis added).

are not sufficient to render the claims prima facie obvious."[36]

Additionally, a skilled artisan had no apparent reason to modify the *Vallet Mas et al.* particles by incorporating polymeric materials used in the core of the *Redlich et al.* particles, because the *Redlich et al.* reference describes particles "having a core containing a solvent blend."[37] Only upon erroneously reducing the scope and content of the *Redlich et al.* reference to a mere disclosure of "core/shell particles comprising acrylate and methacrylate copolymers[,]"[38] can the Examiner allege that "it would have been obvious to combine the acrylic polymers of the '279 patent into the '989 process to incorporate a wider range of hydrophobic agents and impart acid stability on the nanoparticles formulation."[39]

For at least these reasons, a *prima facie* case of obviousness has not been established with regard to independent claims 15 and 26.

Claim 16, which depends from claim 15, further requires the core of the preparation to have at least two separate phases. One of these phases must consist of amorphous particles of the active ingredient, and the other phase must be a molecular dispersion of the active ingredient in a polymer matrix. Claim 16 is non-obvious by virtue of its dependency from claim 15, and also because the cited art fails to describe these additional limitations.

Claim 17, which depends from claim 15, further requires the core of the preparation to have at least two separate phases. One of these phases must consist of amorphous active ingredient, and the other phase must be a polymer matrix free of active ingredient. Claim 17 is non-obvious by virtue of its dependency from claim 15, and also because the cited art fails to describe these additional limitations.

Claim 18, which depends from claim 15, further requires the core polymers to be polymers which are suitable for pharmaceutical and cosmetic applications and which are insoluble or only partly soluble in water. Claim 18 is non-obvious by virtue of its dependency from claim 15, and also because the cited art fails to describe these additional limitations.

---

[36] MPEP §2143.01, citing In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).
[37] Column 4, lines 44 – 48 of US 5,225,279.
[38] Page 3, lines 12 – 13 of the present Office action.
[39] Page 4, lines 6 – 8 of the final Office action mailed June 22, 2007.

Claim 23, which depends from claim 15, further requires the process to produce a hydrosol of the said nanoparticulate preparation. Claim 23 is non-obvious by virtue of its dependency from claim 15, and also because the cited art fails to describe these additional limitations.

Claim 24, which depends from claim 23, further requires the sizes of the hydrosol nanoparticles to increase by less than 50% in the first hour after preparation of the hydrosol. Claim 24 is non-obvious by virtue of its dependency from claim 15, and also because the cited art fails to describe these additional limitations.

Claim 25, which depends from claim 15, further requires the process to comprise preparing a solution of the active ingredient in an organic solvent which is at least 10% by weight miscible in water, mixing this solution with the core polymer or a solution of the core polymer in an organic solvent, and bringing the resulting mixture into contact with an aqueous solution of the coating polymer. Claim 25 is non-obvious by virtue of its dependency from claim 15, and also because the cited art fails to describe these additional limitations.

Claim 27 depends from claim 26 and further requires that on redissolving the preparation has the same particle size distribution, with a variation of 20%, as the initial preparation. Claim 27 is non-obvious by virtue of its dependency from claim 26, and also because the cited art fails to describe these additional limitations.

Regarding Rejections II:

The rejection of claims 19 and 20 under 35 U.S.C. §103(a) over *Vallet Mas et al.* in view of *Weitshies et al.* (US 6,068,857) is in clear error.

Claims 19 and 20 and 21 depend from claim 15. The combination of references, proposed by the Examiner, fail to teach or suggest mixing an active ingredient/polymer solution or precipitate with an aqueous solution of a polymeric coating material, wherein the polymer in the active ingredient/polymer solution is one or more copolymers of acrylates, methacrylates, methacrylic acid or acrylic acid. The Examiner has made no attempt to compensate for this shortcoming in either reference. Thus, a *prima facie* case of obviousness has not been established.

Additionally, this combination of references fails to teach or suggest the utilization of an active ingredient that is an X-ray amorphous active ingredient. As discussed regarding the previous rejection, a person of ordinary skill in the art would not conclude that the active ingredient utilized in the *Vallet Mas et al.* reference is necessarily an X-ray amorphous active ingredient on the basis posited by the Examiner. For this reason, the combination of references cited in this rejection fails to teach or suggest all of the claim limitations. Thus, a *prima facie* case of obviousness has not been established.

Claim 19, which depends from claim 15, further requires the coating matrix of the nanoparticulate preparation to comprise polymeric peptides. Claim 19 is non-obvious by virtue of its dependency from claim 15, and also because the cited art fails to describe these additional limitations.

Claim 20, which depends from claim 15, further requires the preparation to comprise gelatin as coating polymer. Claim 20 is non-obvious by virtue of its dependency from claim 15, and also because the cited art fails to describe these additional limitations.

Claim 21, which depends from claim 15, further requires the preparation to comprise casein or sodium caseinate as coating matrix. Claim 21 is non-obvious by virtue of its dependency from claim 15, and also because the cited art fails to describe these additional limitations.

Regarding Rejection III:

The rejection of claims 19 and 20 under 35 U.S.C. §103(a) over *Vallet Mas et al.* in view of *Liversidge et al.* (US 6,045,829) is in clear error.

Claims 19 and 20 and 21 depend from claim 15. The combination of references, proposed by the Examiner, fail to teach or suggest mixing an active ingredient/polymer solution or precipitate with an aqueous solution of a polymeric coating material, wherein the polymer in the active ingredient/polymer solution is one or more copolymers of acrylates, methacrylates, methacrylic acid or acrylic acid. The Examiner has made no attempt to compensate for this shortcoming. Thus, a *prima facie* case of obviousness has not been established.

Additionally, this combination of references fails to teach or suggest the utilization of an active ingredient that is an X-ray amorphous active ingredient. As discussed regarding the previous rejection, a person of ordinary skill in the art would not conclude that the active ingredient utilized in the *Vallet Mas et al.* reference is necessarily an X-ray amorphous active ingredient on the basis posited by the Examiner. For this reason, the combination of references cited in this rejection fails to teach or suggest all of the claim limitations. Thus, a *prima facie* case of obviousness has not been established.

Claim 19, which depends from claim 15, further requires the coating matrix of the nanoparticulate preparation to comprise polymeric peptides. Claim 19 is non-obvious by virtue of its dependency from claim 15, and also because the cited art fails to describe these additional limitations.

Claim 20, which depends from claim 15, further requires the preparation to comprise gelatin as coating polymer. Claim 20 is non-obvious by virtue of its dependency from claim 15, and also because the cited art fails to describe these additional limitations.

Claim 21, which depends from claim 15, further requires the preparation to comprise casein or sodium caseinate as coating matrix. Claim 21 is non-obvious by virtue of its dependency from claim 15, and also because the cited art fails to describe these additional limitations.

Regarding the showing of unexpected results:

Since a *prima facie* case of obviousness has not been established a showing of unexpected results is in no way required, however, as expressed in the specification, "Surprisingly, the colloidal active ingredient preparations according to the invention show distinctly less growth of hydrosol particles than known active ingredient preparations which consist essentially exclusively of active ingredient mass in the core of the colloidal particles One hour after the aqueous hydrosols have been prepared in the presence of a solvent dissolving the active ingredient, the particle growth is a factor of 4 to 10 less In the case of aqueous hydrosols which contain no solvent dissolving the active

ingredient, the particle growth is reduced by a factor of 1.5 - 5."[40]

In Conclusion:

Applicants respectfully submit that the present application is in condition for allowance, and request favorable action.

NOVAK DRUCE + QUIGG, LLP
1300 Eye St. N.W.
Suite 1000 West
Washington, D.C. 20005

Phone: (202) 659-0100
Fax: (202) 659-0105

Respectfully submitted,
NOVAK DRUCE + QUIGG, LLP

Michael P. Byrne
Registration No.: 54,015

[40] Page 3, indicated lines 30 – 39 of the present Specification.

CLAIMS APPENDIX:

1. - 14. (canceled)

15. A process for preparing a nano-particulate preparation of a pharmaceutical or cosmetic active ingredient with a core/shell structure, in which an X-ray amorphous active ingredient is present in the core together with one or more copolymers of acrylates, methacrylates, methacrylic acid or acrylic acid, and the shell consists of a stabilizing coating matrix, comprising mixing an active ingredient/polymer solution or precipitate with an aqueous solution of a polymeric coating material continuously in a mixing chamber by spraying the two components as a compact jet into a mixing chamber wherein said polymeric coating material is selected from the group consisting of gelatin, chitosan, alginates, casein, caseinates and homopolymers of acrylic acid, and wherein the particle size of the core/shell structure is in the range of 0.05 to 0.9 μm.

16. The process as claimed in claim 15, in which the core of the preparation has at least two separate phases, one phase consisting of amorphous particles of the active ingredient, and the other phase being a molecular dispersion of the active ingredient in a polymer matrix.

17. The process as claimed in claim 15, in which the core of the preparation has at least two separate phases, one phase consisting of amorphous active ingredient,

and the other phase being a polymer matrix free of active ingredient.

18. The process as claimed in claim 15, wherein the core polymers are polymers which are suitable for pharmaceutical and cosmetic applications and which are insoluble or only partly soluble in water.

19. The process as claimed in claim 15, in which the coating matrix of the nanoparticulate preparation comprises polymeric peptides.

20. The process as claimed in claim 15, in which the preparation comprises gelatin as coating polymer.

21. The process as claimed in claim 15, in which the preparation comprises casein or sodium caseinate as coating matrix.

22. (canceled)

23. The process as claimed in claim 15, in which the said process produces a hydrosol of the said nanoparticulate preparation.

24. The process as claimed in claim 23, in which the sizes of the hydrosol nanoparticles increase by less than 50% in the first hour after preparation of the hydrosol.

25. A process for producing preparations as claimed in claim 15, which comprises preparing a solution of the

active ingredient in an organic solvent which is at least 10% by weight miscible in water, mixing this solution with the core polymer or a solution of the core polymer in an organic solvent, and bringing the resulting mixture into contact with an aqueous solution of the coating polymer.

26. A nanoparticulate preparation of a pharmaceutical or cosmetic active ingredient with a core/shell structure in which an X-ray amorphous active ingredient is present in the core together with one or more polymers selected from the group consisting of copolymers of acrylates, methacrylates, methacrylic acid and acrylic acid, and the shell consists of a stabilizing coating matrix wherein said polymeric coating material is selected from the group consisting of gelatin, chitosan, alginates, casein, caseinates and homopolymers of acrylic acid, the particle size of the core/shell structure being in the range of 0.05 to 0.9 μm, and which nanoparticulate preparation is obtained by mixing an active ingredient/core polymer solution or precipitate with the an aqueous solution of the polymeric coating material continuously in a mixing chamber.

27. The preparation of claim 26, that on redissolving has the same particle size distribution, with a variation of 20%, as the initial preparation.

EVIDENCE APPENDIX:

None.

RELATED PROCEEDINGS A APPENDIX:

None.